



3 RD. INTERNATIONAL CONFERENCE  
SOLAR ENERGY STORAGE AND  
APPLIED PHOTOCHEMISTRY,  
Cairo, Egypt  
8 - 14 January 1995

A  
I  
N  
S  
H  
A  
M  
S  
U  
N  
I  
V  
E  
R  
S  
I  
T  
Y



p h r w t      m      i m n

Changes      with      rays of light

19950516 044

THE PROGRAM &  
THE LIST OF PARTICIPANTS



DISTRIBUTION STATEMENT A

Approved for public release;  
Distribution Unlimited

Third International Conference on  
**SOLAR ENERGY STORAGE AND APPLIED  
PHOTOCHEMISTRY**

8-14 JANUARY 1995, CAIRO, EGYPT

R&D 7539-CH-02  
N 68171-94-M-6700

HONORARY PRESIDENTS OF THE CONFERENCE

**PROFESSOR A. M. ABDEL-HAFEZ**

THE PRESIDENT, AIN SHAMS UNIVERSITY

**PROFESSOR A. M. RABEI**

DEAN, FACULTY OF SCIENCE

**CHAIRMAN**

**M. S. A. ABDEL-MOTTALEB**

**ORGANIZED BY**

**PHOTOENERGY CENTER**

**FACULTY OF SCIENCE, AIN SHAMS UNIVERSITY**

**IN COOPERATION WITH THE DEPARTMENT OF CHEMISTRY**

DTIC QUALITY INSPECTED 5

## CONTENTS

|   | <b>PAGE</b> |
|---|-------------|
| [ 1] ACKNOWLEDGEMENT .....                    | 1           |
| [ 2] GENERAL INFORMATION .....                | 2           |
| [ 3] CONFERENCE COMMITTEES:                   |             |
| INTERNATIONAL .....                           | 4           |
| LOCAL ADVISORY .....                          | 5           |
| ORGANIZING .....                              | 6           |
| [ 4] THE PROGRAM .....                        | 7           |
| SUMMARY TIMETABLE .....                       | 8           |
| CONFERENCE FLOW .....                         | 10          |
| [ 5] LIST OF AUTHORS .....                    | 17          |
| [ 6] LIST OF INTERNATIONAL PARTICIPANTS ..... | 30          |
| [ 7] LIST OF EGYPTIAN PARTICIPANTS .....      | 33          |

|                      |                                     |
|----------------------|-------------------------------------|
| Accession For        |                                     |
| NTIS GRA&I           | <input checked="" type="checkbox"/> |
| DTIC TAB             | <input type="checkbox"/>            |
| Unannounced          | <input type="checkbox"/>            |
| Justification        |                                     |
| By <u>perform 50</u> |                                     |
| Distribution/        |                                     |
| Availability Codes   |                                     |
| Date                 | Avail and/or<br>Special             |
| A-1                  |                                     |

**The organizers thank deeply the following organizations  
for their generous financial and moral support**

**Ministry of Education**

**Ministry of Petroleum**

**Ministry of International Cooperation**

**Cairo Governorate**

**International Centre for Science and High Technology**

**[ICTP, Trieste, Italy]**

**International Science Foundation (ISF)**

**European Research Office (ERO), US Army**

**Naval Research Office in Europe, US Navy**

**A session will be sponsored by European Research Office  
of US Airforce**

## **GENERAL INFORMATION**

On behalf of the organizing committee, I would like to welcome you to Egypt. I hope that you will enjoy your stay here in Egypt and benefit from the scientific contents of the Conference.

His excellency the Governor of Cairo and Professor Abdel-Hafiz, the president of Ain Shams University invite all of you to a Welcome reception Cocktail party near Aramis Hall at 21.00 hs on Sunday 8 January, after the opening lecture.

### **Accommodation**

A block of rooms has been reserved to accommodate the conference participants at Le Meridien Hotel (Heliopolis) at a special reduced rates. Continental Breakfast, Taxes and Services are inclusive.

Any extra expenses (for example, Laundry, long distant telephone calls, minibar, other restaurant charges, ..., etc.) should be paid directly to the Hotel. Therefore, please do not forget to make the necessary check with the hotel registration-information section to pay for the extra before leaving. This would be greatly appreciated.

### **Lunches (Open Buffet)**

Please use the enclosed appropriate coupon. Make sure you show the waiter the coupons as you entered the restaurant. Drinks are not inclusive. Therefore, you have to pay for your drinks to the hotel directly.

Extra Lunch coupons (LE 40.0 or \$12.0 each) are available at the registration/ information desk of the conference.

### **Dinners (Open Buffet)**

Coupons are available at special rate for participants (LE 50.0 or \$15.0). Ask for coupons at the Conference registration desk.

## **Transportation**

A shuttle bus service is available free of charge, to the Airport. Please do inform LeMeridien's information desk about the details of your flight from Cairo. Upon request, the Hotel will manage to give you a drive to the Airport.

## **Social Activities**

The following events are arranged, free of charge, for all participants:

**Welcome Reception; Sunday 8 January after the opening session.  
Excursion to the Egyptian Museum of Antiquities, Pyramids of Giza  
and Sphinx; Wednesday 11 January.**

In addition to the above, during the scientific program we will operate *an accompanying person program* to include tours to visit some historic, Islamic and Coptic places.

Transport will depart from outside Le Meridien Hotel at 8.45 hs.

## **Conference Banquet;**

has been shifted to Thursday 12 January. Egyptian traditional music and entertainments will be provided (Tickets: \$60). Please use the banquet coupons.

With my very best wishes.

**Sabry Abdel-Mottaleb  
Chairman**

## **INTERNATIONAL SCIENTIFIC AND ADVISORY COMMITTEE:**

|                        |               |
|------------------------|---------------|
| <b>Almgren M</b>       | (Sweden)      |
| <b>Azumi T</b>         | (Japan)       |
| <b>Balzani V</b>       | (Italy)       |
| <b>Bolton J</b>        | (Canada)      |
| <b>Caldwell R</b>      | (USA)         |
| <b>Calzaferri G</b>    | (Zwitzerland) |
| <b>Denardo G</b>       | (Italy)       |
| <b>De Schryver F C</b> | (Belgium)     |
| <b>Doepp D</b>         | (Germany)     |
| <b>Duerr H</b>         | (Germany)     |
| <b>El-Sayed M A</b>    | (USA)         |
| <b>Getoff N</b>        | (Austria)     |
| <b>Gilbert A</b>       | (UK)          |
| <b>George M</b>        | (India)       |
| <b>Guillet J</b>       | (Canada)      |
| <b>Hoffman M</b>       | (USA)         |
| <b>Kossanyi J</b>      | (France)      |
| <b>Krishnan V</b>      | (India)       |
| <b>Kuzmin M.</b>       | (Russia)      |
| <b>Lehn J-M</b>        | (France)      |
| <b>Loutfy R O</b>      | (Canada)      |
| <b>Masuhara H</b>      | (Japan)       |
| <b>Mazzucato U</b>     | (Italy)       |
| <b>Mele A</b>          | (Italy)       |
| <b>Rahman N</b>        | (Italy)       |
| <b>Sato H</b>          | (Japan)       |
| <b>Song P-S</b>        | (USA)         |
| <b>Steer R</b>         | (Canada)      |
| <b>Tolbert L</b>       | (USA)         |
| <b>Tokumaru K</b>      | (Japan)       |
| <b>Tributsch H</b>     | (Germany)     |
| <b>Valeur B</b>        | (France)      |
| <b>Whitten D</b>       | (USA)         |
| <b>Wilkinson F</b>     | (UK)          |
| <b>Yanagida S</b>      | (Japan)       |
| <b>Zewail A</b>        | (USA)         |

## **LOCAL ADVISORY AND SCIENTIFIC COMMITTEE:**

|                          |   |
|--------------------------|---|
| <b>Abdel-Bary S.</b>     | (Al-Mansourah University, Fac. Science) |
| <b>Abdel-Rehiem S.S.</b> | (Ain Shams, Fac. Science/Chemistry)     |
| <b>Abu-Shady M.R.</b>    | (Ain Shams, Fac. Science)               |
| <b>Ahmed M. A.</b>       | (Cairo University, Fac. Dent., DEAN)    |
| <b>Azzam A.M.</b>        | (Ain Shams, Fac. Science/CHAIRMAN)      |
| <b>Badr M. Z.</b>        | (Assiut University, Fac. Science)       |
| <b>Barakat N.</b>        | (Ain Shams, Fac. Science/Physics)       |
| <b>Ebeid E. M.</b>       | (Tanta Univer., Fac.Science/Chemistry)  |
| <b>El Batanouny M.</b>   | (Cairo University, Fac. Medicine)       |
| <b>El-Baz A.</b>         | (Military Tech. College)                |
| <b>El-Nadi L.</b>        | (Cairo University, Fac. Science, NILES) |
| <b>El-Mously M.</b>      | (Ain Shams, Fac. Science/Physics)       |
| <b>El-Sharkawy M.</b>    | (Ain Shams, Fac. Science/Physics)       |
| <b>Fahmy F.</b>          | (Ain Shams, Fac. Sc./Chemistry, HEAD)   |
| <b>Guindy N. M.</b>      | (Ain Shams, Fac. Science/Chemistry)     |
| <b>Hashem A.</b>         | (Zagazig University, Fac Science, DEAN) |
| <b>Hassan S. A.</b>      | (Ain Shams, Fac. Science/Chemistry)     |
| <b>Hassan S. E.</b>      | (Ain Shams, Fac. Science/Chemistry)     |
| <b>Ismail M. F.</b>      | (Ain Shams, Fac. Science/Chemistry)     |
| <b>Kaddah A.</b>         | (Ain Shams, Fac. Science/Chemistry)     |
| <b>Kamel M.</b>          | (National Research Center, Cairo)       |
| <b>Nada A. A.</b>        | (National Research Centre, Cairo)       |
| <b>Naguib Y.M.</b>       | (Suez Canal University/Alariesh)        |
| <b>Nor-El-Din A. M.</b>  | (El-Minia University, Fac. Science)     |
| <b>Omar A. O.</b>        | (Ain Shams, Fac. Engineering/Physics)   |
| <b>Omar M. T.</b>        | (Ain Shams, Fac. Science/Chemistry)     |
| <b>Ragaie H. F.</b>      | (Ain Shams, Fac. Eng./Electronics)      |
| <b>Salem M. R.</b>       | (Ain Shams, Fac. Science/Chemistry)     |
| <b>Talaat H.</b>         | (Ain Shams, Fac. Science/Physics)       |
| <b>Zahra A. M.</b>       | (Ain Shams, Fac. Education/Chemistry)   |

## **ORGANIZING COMMITTEE:**

|                              |                           |
|------------------------------|---------------------------|
| <b>Abdel-Halim M.</b>        | <b>(ASU)</b>              |
| <b>Abdel-Hameed F.</b>       | <b>(ASU)</b>              |
| <b>Abdel-Mottaleb M.S.A.</b> | <b>(ASU, Chairman)</b>    |
| <b>Abdel-Shafie A.</b>       | <b>(ASU)</b>              |
| <b>Abo-Aly M.</b>            | <b>(ASU)</b>              |
| <b>Aly N. A.</b>             | <b>(ASU)</b>              |
| <b>Antonious M.S.</b>        | <b>(ASU)</b>              |
| <b>Attia M. Attia</b>        | <b>(ASU)</b>              |
| <b>El-Botanie M.</b>         | <b>(Desert Institute)</b> |
| <b>El-Sayed B. A.</b>        | <b>(Al-Azhar U)</b>       |
| <b>El-Shobaky E.</b>         | <b>(ASU)</b>              |
| <b>Habashy M. M.</b>         | <b>(ASU)</b>              |
| <b>Hamed A.</b>              | <b>(ASU)</b>              |
| <b>Hashem K.</b>             | <b>(ASU)</b>              |
| <b>Hamza M. S.</b>           | <b>(ASU)</b>              |
| <b>Ibrahim A. T.</b>         | <b>(Giza Governorate)</b> |
| <b>Ismaiel L. F.</b>         | <b>(Al-Azhar U/Girls)</b> |
| <b>Khalil M. H.</b>          | <b>(ASU)</b>              |
| <b>Salem M. A.</b>           | <b>(ASU)</b>              |
| <b>Souaya E. Raymond</b>     | <b>( ASU)</b>             |

## **THE PROGRAM**

## SUMMARY TIMETABLE FOR SES&APC CONFERENCE '95

| Date | Morning     | Afternoon   | Evening |
|------|-------------|-------------|---------|
|      | 08.45-12.30 | 14.00-17.50 | 18.30-  |

**SUNDAY 8 JANUARY 1995**

### REGISTRATION

**OPENING**  
 [ABDEL-MOTTALI EB]  
**OPENING LECTURE**  
 [LOUTFY R.J.]  
 GRAETZEL M.  
**RECEPTION**

**MONDAY 9 JANUARY 1995**

**PLENARY LECTURES**  
 [EL-BAYOUMI O.]  
 GUILLET J.  
 CALZAFERRI G.

**INVITED LECTURES**  
 [AZUMI T.]  
 BOXER S.  
 OPPENLAENDER T.  
 FITZMURICE D.

**PLENARY LECTURES**  
 [KOSSANYI J.]  
 HILL C.  
 BRASLAVSKY S.

**INVITED LECTURES**  
 [TOLBERT L.]  
 TESTA A.  
 MAZZUCATO U.  
 BADR M. Z.

**POSTER A**  
 [DOEPP D.]

**TUESDAY 10 JANUARY**

**PLENARY LECTURES**  
 [HILL C.]  
 AZUMI T.  
 LOUTFY R. O.

**INVITED LECTURES**  
 HALL (1) HALL (2)  
 [MAZZUCATO U.] [MEL'NIKOV M.]  
 LEUPOLD D. KRISHNAN V.  
 KURRECK H. AQUILANTI V.  
 HOFFMAN M. ZENKEVICH E. I.

**PLENARY LECTURES**  
 [ZIMMERMAN H.]  
 GIARDINI A.  
 SONG P.-S.

**INVITED LECTURES**  
 HALL (1) HALL (2)  
 [TESTA A.] [KRISHNAN V.]  
 FASSLER D. FARAH L.  
 ZACHARIASSE K. EREMINKO A.

**WEDNESDAY 11 JANUARY EGYPTIAN MUSEUM, PYRAMIDES AND SPHINX**

[LUNCH WILL BE PROVIDED]

|             |                    |                    |
|-------------|--------------------|--------------------|
| <b>Date</b> | <b>Mornening</b>   | <b>Afternoon</b>   |
|             | <b>Evening</b>     |                    |
|             | <b>08.45-12.30</b> | <b>14.00-17.50</b> |

**THURSDAY 12 JANUARY 1995**

**PLENARY LECTURES**

[FAHMY F.]  
MORRISON H  
ZIMMERMAN H.

**PLENARY LECTURES**

[BRASLAVSKY S.]  
TOLBERT L.  
GREVELS F.

**BANQUET**

**INVITED LECTURES**

HALL (1) HALL (2)  
[MORRISON H] [GRAETZEL M.]  
KOSSANYI J. ALONSO-VANTE N.  
FUJIMURA Y OZANAM F.  
LOEHMANNSROEBEN H. ETMAN M.

**INVITED LECTURES**

HALL (1) HALL (2)  
[BOXER S.] [HOFFMAN M.]  
HAU D.-M. TERENSEKAYA I.  
KORPPI-TOMMOLA J. MEL'NIKOV  
UZHINOV B. M.

**FRIDAY 13 JANUARY**

**PLENARY LECTURES**

[CALZAFERRI G.]  
DUERR H.  
DOEPP D.

**PLENARY LECTURES**

[LOUTFY R O]  
BOLTON J.  
HARRIMAN A

**INVITED LECTURES**

[GREVELS F.]  
BILLING  
SPANHEL  
ABD EL AZIZ A.

**CLOSING REMARKS**

ABDEL-MOTTALEB M. S.  
LOUTFY R. O.

**SATURDAY 14 JANUARY**

**DEPARTURE**

|                         |                   |
|-------------------------|-------------------|
| Coffee/Tea: 10.15-10.35 | 15.45-16.05       |
| Lunch:                  | 12.30 ----- 14.00 |

**POSTER PRESENTATION BASED ON ALPHABETICAL ORDER**

POSTER A: FOR AUTHORS [A-E]  
POSTER B: FOR AUTHORS [F-Z]

## PROGRAM

THE PROGRAM OF THE CONFERENCE IS AS FOLLOWS

### 1st DAY SUNDAY 8 JANUARY 1995

|               |  |
|---------------|--|
| 14.00 - 18.00 | REGISTRATION AT SETI ROOM  |
| 18.30 - 19.15 | OPENING CEREMONY ARAMIS HALLS 1+2<br><i>ABDEL-MOTTALEB M. S. A. AND LOUTFY R.</i>                                |
| 19.30 - 20.30 | OPENING LECTURE<br>CHAIRMAN <i>LOUTFY R.</i> (CANADA)  |
| L 1           | <i>GRAETZEL M.</i> (SWITZERLAND)<br>NANOCRYSTALLINE SOLAR CELLS; SCIENTIFIC PRINCIPLES AND ECONOMIC PERSPECTIVES |
| 20.30 - 21.30 | RECEPTION  |

### 2nd DAY MONDAY 9 JANUARY 1995

|                     |  |
|---------------------|--|
| INVITED LECTURES    | ARAMIS HALLS 1 + 2<br>CHAIRMAN: <i>EL-BAYOUMI O</i> (USA)  |
| L 2                 | <b>8.45 - 9.40</b> <i>GUILLET, J.</i> (CANADA)<br>SOLAR SYNTHESIS OF HYDROGEN PEROXIDE   |
| L 3                 | <b>9.40 -10.35</b> <i>CALZAFERRI G.</i> (SWITZERLAND)<br>DYE MOLECULES IN ZEOLITES AS ARTIFICIAL ANTENNA SYSTEMS   |
| <b>10.35 -10.45</b> | COFFEE BREAK   |
| INVITED LECTURES    | CHAIRMAN: <i>AZUMI T.</i> (JAPAN)  |
| L 4                 | <b>10.45-11.20</b> <i>BOXER STEVEN G.</i> (USA)<br>MECHANISM OF THE EARLY STEPS IN PHOTOSYNTHESIS  |
| L5                  | <b>11.20-11.55</b> <i>OPPENLAENDER Th.</i> (GERMANY)<br>NOVEL VACUUM-UV-(VUV) AND UV-EXCIMER FLOW THROUGH PHOTORECTORS FOR WAST WATER TREATMENT AND FOR WAVELENGTHS SELECTIVE PHOTOCHEMISTRY |

|                         |               |   |
|-------------------------|---------------|---|
| L 6                     | 11.55-12.35   | <b>FITZMAURICE D. (IRELAND)</b><br>HETROSUPRAMOLECULAR CHEMISTRY: AN APPROACH TO MODULATING FUNCTION IN MOLECULAR DEVICES.                          |
|                         | 12.30 - 14.00 | <b>LUNCH BREAK</b>  |
| L 7                     | 14.00-14.55   | <b>CHAIRMAN: KOSSANYI J. (FRANCE)</b><br><b>HILL CRAIG L. (USA)</b><br>EXCITED STATE CHARACTERISTICS AND NEW UNACTIVATED C-H BOND FUNCTIONALIZATION |
| L 8                     | 14.55-15.50   | PHOTOCATALYSIS BY $W_{10}O_{32}^{4-}$<br><b>BRASLAVSKY S. (GERMANY)</b><br>TIME-RESOLVED PHOTOTHERMAL MEASUREMENTS ON BIOLOGICAL PHOTORECEPTORS     |
|                         | 15.50 - 16.05 | <b>COFFEE BREAK</b>   |
| L 9                     | 16.05-16.40   | <b>TESTA A. C. (USA)</b><br>PHOTOINDUCED PROTON TRANSFER IN SUBSTITUTED PYRIDINES   |
| L 10                    | 16.40-17.15   | <b>MAZZUCATO UGO (ITALY)</b><br>PHOTOCROMIC MATERIALS: A COMPREHENSIVE KINETIC THERMO-DYNAMIC AND PHOTOCHEMICAL STUDY                               |
| L 11                    | 17.15-17.50   | <b>BADR Z. (EGYPT)</b><br>PHOTOLYSIS AND THERMOLYSIS OF ACID AMIDES AND SULPHONAMIDES; MECHANISTIC STUDIES  |
| <b>POSTER SESSION A</b> |               | <b>AMINOPHIS</b>  |
|                         |               | <b>CHAIRMAN: DOEPP D. (GERMANY)</b>   |
|                         | 17.50-21.00   | AUTHORS A - E   |

| <b>3rd DAY TUESDAY 10 JANUARY 1995</b> |               |  |
|--|---------------|--|
| <b>INVITED LECTURES</b>                |               | <b>ARAMIS 1</b>  |
| L 12                                   | 8.45- 9.40    | <b>CHAIRMAN: HILL C. L. (USA)</b><br><b>AZUMI T. (JAPAN)</b><br>STUDIES OF PHOTOCHEMICAL REACTIONS BY NUCLEAR SPIN POLARI-ZATION-DETECTED ESR SPECTROSCOPY |
| L 13                                   | 9.40- 10.35   | <b>LOUTFY R.O. (CANADA)</b><br>A NON-SILVER DRY-PROCESSED PHOTOGRAPHIC ARTS FILM   |
|  | 10.35 - 10.45 | <b>COFFEE BREAK</b>  |

|                         |                     |   |
|-------------------------|---------------------|---|
| <b>INVITED LECTURES</b> | <b>ARAMIS 1</b>     |   |
| L 14                    | <b>10.45-11.20</b>  | <b>CHAIRMAN: MAZZUCATO U. (ITALY)</b><br><b>LEUPOLD D. (GERMANY)</b><br>CHARACTERIZATION OF PHOTOSYNTHETIC ANTENNAS<br>BY NONLINEAR POLARIZATION SPECTROSCOPY<br>(FREQUENCY DOMAIN) |
| L 15                    | <b>11.20-11.55</b>  | <b>KURRECK H. (GERMANY)</b><br>MIMICKING PRIMARY PROCESSES OF<br>PHOTOSYNTHESIS MODEL COMPOUNDS, LIGHT-<br>INDUCED CHARGE SEPARATION.   |
| L 16                    | <b>11.55-12.30</b>  | <b>HOFFMAN M. Z. (USA)</b><br>ELECTROLYTE AND TEMPERATURE EFFECTS IN<br>PHOTOINDUCED INTERMOLECULAR ELECTRON-<br>TRANSFER REACTIONS   |
| <b>INVITED LECTURES</b> | <b>ARAMIS 2</b>     |   |
| L 17                    | <b>10.45-11.20</b>  | <b>CHAIRMAN: MEL'NIKOV M. (RUSSIA)</b><br><b>KRISHNAN V. (INDIA)</b><br>NON-PLANAR PORPHYRIN MOLECULAR ASSEMBLIES   |
| L 18                    | <b>11.20-11.55</b>  | <b>AQUILANTI V. (ITALY)</b><br>NONADIABATIC ENERGY TRANSFER   |
| L 19                    | <b>11.55-12.30</b>  | <b>ZENKEVICH E. I (BELARUS)</b><br>DIPOLE-DIPOLE AND EXCHANGE ENERGY TRANSFER<br>IN DIFFERENT TYPES OF PORPHYRIN CHEMICAL<br>DIMERS   |
| <b>12.30 - 14.00</b>    | <b>LUNCH BREAK</b>  |   |
| <b>INVITED LECTURES</b> | <b>ARAMIS 1</b>     |   |
| L 20                    | <b>14.00-14.55</b>  | <b>CHAIRMAN: ZIMMERMAN H. (USA)</b><br><b>GIARDINI A. (ITALY)</b><br>R2PI DETECTION AND SPECTROSCOPY OF VAN DER<br>WAALS COMPLEXES OF 4-FLUOROSTYRENE WITH<br>RARE GASES            |
| L 21                    | <b>14.55-15.50</b>  | <b>SONG PILL-SOON (USA)</b><br>PHYTOCHROME AS LIGHT SENSOR FOR<br>PHOTOSYNTHETIC GENE ACTIVATION  |
| <b>15.50 - 16.05</b>    | <b>COFFEE BREAK</b> |   |
| <b>INVITED LECTURES</b> | <b>ARAMIS 1</b>     |   |
| L 22                    | <b>16.05-16.40</b>  | <b>CHAIRMAN: TESTA A. (USA)</b><br><b>FASSLER D. (GERMANY)</b><br>FLUORESCENCE LIFTIMES OF ADSORBED<br>POLYMETHINES   |
| L 23                    | <b>16.40-17.15</b>  | <b>ZACHARIASSE K. (GERMANY)</b>   |

INFLUENCE OF ENERGY GAP DELTA E(S<sub>1</sub>,S<sub>2</sub>) AND  
AMINO N-INVERSION IN INTRAMOLECULAR CHARGE  
TRANSFER. DUAL FLUORESCENCE AND SINGLE CT-  
EMISSION

**INVITED LECTURES      ARAMIS 2**

L 24      16.05-16.40      **CHAIRMAN: KRISHNAN V. (INDIA)**  
**FARA V. L. (ROMANIA)**

PHOTOPHYSICAL AND PHOTOCHEMICAL PROPERTIES  
OF DYE MOLECULES IN POLYMERS USED FOR  
FLUORESCENT SOLAR CONCENTRATORS.

L 25      16.40-17.15      **EREMENKO A. (UKRAINE)**  
PHOTOINDUCED ELECTRON TRANSFER BETWEEN  
MOLECULES IN SILICA MATRICES

**POSTER SESSION B AMENOPHIS + HATCHEPSUT**

**CHAIRMAN: GEORGE M. (INDIA)**  
17.15-20.30      **AUTHORS F - Z**

**4<sup>th</sup> DAY WEDNESDAY 11 JANUARY 1995**  
**EXCURSION**  
**EGYPTIAN MUSEUM**  
**PYRAMIDS,... ETC.**  
**TRANSPORT WILL DEPART FROM OUTSIDE**  
**THE MERIDIEN HOTEL HELIOPOLIS**  
**AT 08.45**  
**<LUNCH BOXES WILL BE PROVIDED>**

**5<sup>th</sup> DAY THURSDAY 12 JANUARY 1995**

**INVITED LECTURES      ARAMIS 1**

L 26      8.45-9.40      **CHAIRMAN: FAHMY F. (EGYPT)**  
**MORRISON H. A. (USA)**

PHOTOCHEMICAL REARRANGEMENTS OF  
OXAZRINDINES

L 27      9.40-10.35      **ZIMMERMAN H. E. (USA)**  
RECENT ADVANCES IN MECHANISTIC AND  
EXPLORATORY ORGANIC PHOTOCHEMISTRY

10.35-10.45

**COFFEE BREAK**

**INVITED LECTURES****ARAMIS 1**CHAIRMAN: *MORRISON H. (USA)*

L 28      10.45-11.20    **KOSSANYI J. (FRANCE)**  
              UNUSUALLY STRONG EMISSION FROM EXCIPLEXES  
              FORMED BETWEEN BENZENOID SOLVENTS AND  
              DIBENZOYLMETHANATBORON DIFLUORIDE

L 29      11.20-11.55    **FUJIMURA Y. (JAPAN)**  
              NUCLEAR WAVEPACKET STUDY OF UNIMOLECULAR  
              REACTIONS IN ULTRASHORT PULSED LASER

L 30      11.55-12.30    **LOEHMANNSRÖEBEN H.G. (GERMANY)**  
              FLUORESCENCE OF POLYNUCLEAR AROMATIC  
              COMPOUNDS AND MINERAL OILS IN ENVIRONMENTAL  
              MONITORING

**INVITED LECTURES****ARAMIS 2**CHAIRMAN: *GRAETZEL M. (SWITZERLAND)*

L 31      10.45-11.20    **ALONSO-VANTE N. (GERMANY)**  
              THE SIGNIFICANCE OF SURFACE STATES FOR  
              PHOTOELECTROCATALYSIS AT THE  
              SEMICONDUCTOR/ELECTROLYTE INTERFACES

L 32      11.20-11.55    **OZANAM F. (FRANCE)**  
              IN-SITU INFRARED STUDY OF THE INTERFACIAL  
              LAYER DURING THE ANODIC DISSOLUTION OF A  
              SILICON ELECTRODE IN A FLUORIDE ELECTROLYTE

L 33      11.55-12.30    **ETMAN M. (FRANCE)**  
              Si ELECTROCHEMISTRY

**12.30 - 14.00****LUNCH BREAK****INVITED LECTURES****ARAMIS 1**CHAIRMAN: *BRASLAVSKY S. (GERMANY)*

L 34      14.00-14.55    **TOLBERT L. M. (USA)**  
              EXCITED-STATE PROTON TRANSFER IN CONSTRAINED  
              ENVIRONMENT

L 35      14.55-15.50    **GREVELS F.-W. (GERMANY)**  
              PHOTOLYSIS OF GROUP 8 METAL CARBONYLS:  
              TRANSIENT IR SPECTROSCOPY, PHOTOKINETICS AND  
              QUANTUM YIELDS OF CO SUBSTITUTION

**15.50-16.05****COFFEE BREAK****INVITED LECTURES****ARAMIS 1**

|      |                    |   |
|------|--------------------|---|
| L 36 | <b>16.05-16.40</b> | <b>CHAIRMAN: BOXER S. (USA)</b><br><b>HAU DOU-MONG (TAIWAN, CHINA)</b><br>PHOTOCHEMOTHERAPY ON EXPERIMENTAL TUMOR<br>WITH PHOTOFRIN II AND LASER  |
| L 37 | <b>16.40-17.15</b> | <b>KORPI-TOMMOLA J. (FINLAND)</b><br>SELFORGANIZATION OF CHLOROPHYLLS IN<br>HYDROCARBON SOLUTION AND IN VIVO SYSTEMS:<br>PICO- AND FEMTOSECOND RELAXATION IN WATER<br>BOUND CHLA AGGREGATES AND CL. TEPIDUM<br>CHLOROSOMES. |
| L 38 | <b>17.15-17.55</b> | <b>UZHINOV B.M. (RUSSIA)</b><br>EXCITED STATE PROTON TRANSFER LASERS  |

#### **INVITED LECTURES      ARAMIS 2**

|      |                    |  |
|------|--------------------|--|
| L 39 | <b>16.05-16.40</b> | <b>CHAIRMAN: HOFFMAN M. (USA)</b><br><b>TERENETSKAYA I. (UKRAINE)</b><br>AN IN VITRO MODEL OF PREVITAMIN D<br>PHOTOSYNTHESIS AS POSSIBLE MONITOR OF SOLAR<br>UVB RADIATION: KINETIC STUDIES USING TUNABLE<br>LASER |
| L 40 | <b>16.40-17.15</b> | <b>MEL'NIKOV M. (RUSSIA)</b><br>PHOTORADICAL AGEING OF SOLID POLYMERS  |

#### **CONFERENCE BANQUET**

**EGYPTIAN ENTERTAINMENT**

**STARTING FROM 19.30**

#### **6th DAY FRIDAY 13 JANUARY 1995**

#### **INVITED LECTURES      ARAMIS 1**

|      |                   |   |
|------|-------------------|---|
| L 41 | <b>9.00-9.55</b>  | <b>CHAIRMAN: CALZAFERRI G. (ZWITZERLAND)</b><br><b>DUERR H. (GERMANY)</b><br>MOLECULAR AND SUPRAMOLECULAR SYSTEMS IN<br>PHOTOCHEMISM  |
| L 42 | <b>9.55-10.50</b> | <b>DOEPP D. (GERMANY)</b><br>REGIO- AND STEREOSELECTIVITY IN LIGHT INDUCED<br>[4+2]-CYCLOADDITIONS OF ALPHA-CYANOENAMINES<br>TO AROMATIC CARBONYL COMPOUNDS, NITRILES<br>AND HYDROCARBONS |

**10.50 - 11.05**

**COFFEE BREAK**

**INVITED LECTURES****ARAMIS 1**CHAIRMAN: *GREVELS F.-W. (GERMANY)*

L 43      **11.05-11.40**    *BILLING R. (GERMANY)*  
              SELECTIVE OXIDATION OF ALCOHOLS BY  
              DIPHENYLIODONIUM IONS IN A PHOTOINDUCED  
              CHAIN REACTION

L 44      **11.40-12.15**    *SPANHEL Lubomir (GERMANY)*  
              SOL-GEL SYNTHESIS AND SPECTROSCOPIC  
              PROPERTIES OF NANOSCALED HYBRID MATERIALS

L 45      **12.15-12.55**    *ABD-EL-AZIZ A. S. (CANADA)*  
              PHOTOLYSIS OF POLYAROMATIC ETHERS AND  
              THIOETHERS WITH PENDANT  
              CYCLOPENTADIENYLIRON MOIETIES

**12.55 - 14.00****LUNCH BREAK****INVITED LECTURES****ARAMIS 1**CHAIRMAN: *LOUTFY R. (CANADA)*

L 46      **14.00-14.55**    *BOLTON J. (CANADA)*  
              SOLAR DETOXIFICATION OF WASTE WATER

L 47      **14.55-15.50**    *HARRIMAN A. (FRANCE)*  
              PHOTOCHEMOTHERAPY WITH CYANINE DYES

**15.50 -16.20****CLOSING REMARKS***ABDEL-MOTTALEB M. S. A.***COFFEE AND REFRESHMENTS**

12/21/94 07:37 AM

**LIST OF INTERNATIONAL PARTICIPANTS,  
PRINCIPAL AUTHORS AND  
SCIENTIFIC CONTRIBUTIONS**

**KEY: 1 P A1 = PAGE 1 IN ABSTRACT'S BOOK, POSTER NUMBER A1  
LEC 45 = LECTURE NUMBER 45 IN THE PROGRAM  
FULL LIST OF AUTHORS AND ADDRESSES ARE GIVEN IN THE BOOK OF  
ABSTRACTS (ON EACH ABSTRACT)**

**ABDEL-AZIM S. (EGYPT)**

**1**

**P A1**

THE RAPID DETERIORATION OF ANTHRACENE LASER DYES IN CHLORINATED ORGANIC SOLVENTS

**ABD-EL-AZIZ A. S. (CANADA)**

**2**

**LEC 45**

PHOTOLYSIS OF POLYAROMATIC ETHERS AND THIOETHERS WITH PENDANT CYCLOPENTADIENYLIRON MOIETIES

**ABDEL-LATIF F. M. (EGYPT)**

**3**

**P A2**

PHOTOCHEMICAL REACTION OF 4-NITROBENZYLIDENE MALONONITRILES WITH HYDROGEN DONORS

**ABDEL-RAZIK E. A. (EGYPT)**

**4**

**P A3**

HOMOGENEOUS PHOTOINITIATED GRAFT COPOLYMERIZATION OF 4-VINYL PYRIDINE ONTO ETHYL CELLULOSE

**ABDEL-SHAFI A. (ENGLAND/EGYPT)**

**5**

**P A4-5**

1- CHARGE TRANSFER INTERACTIONS AND EFFICIENCES OF SENSITIZED SINGLET OXYGEN PRODUCTION FROM SUBSTITUTED BIPHENYLS

2- SINGLET-SINGLET ENERGY TRANSFER BETWEEN COUMARIN-4 - WATER EXCIPLEX AND COUMARINE314 IN AQUEOUS AND MICELLAR MEDIA

**ABDEL-WAHAB A. A. (EGYPT)**

**7**

**P A6**

ON THE PHOTOGENERATION OF THE PYRIDYLCARBENES

**ABDOU W. (EGYPT)**

**8**

**P A7**

ENVIRONMENTAL DEGRADATION OF PESTICIDES UNDER THE INFLUENCE OF LIGHT

|  |           |
|--|-----------|
| <b>ABO ALY M. (EGYPT)</b>  | <b>9</b>  |
| <b>P A8</b>  |           |
| ANALYTICAL DETERMINATION OF IRON (III): FLUORESCENCE QUENCHING<br>TECHNIQUE  |           |
| <b>ABOU-ELZAHAB M. M. (EGYPT)</b>  | <b>10</b> |
| <b>P A9-10</b>   |           |
| 1- SYNTHESIS OF SOME POTENTIAL PHOTO-THERAPEUTIC AND SINGLET<br>OXYGEN SENSITIZERS: HEMATOPORPHYRIN-COUMARINS (HPD-C) AND<br>HEMATOPORPHYRIN - FUROCOUMARINS (HPD-FC)<br>2- PHOTOCHEMICAL REACTIONS OF DIBENZALACETONE |           |
| <b>ABO-FARHA S. A. M. (EGYPT)</b>  | <b>12</b> |
| <b>P A11</b>   |           |
| THE ROLE OF INORGANIC COMPLEXES IN ENERGY CONVERSION   |           |
| <b>ABOU-ZIED K.A. (EGYPT)</b>  | <b>13</b> |
| <b>P A12</b>   |           |
| ENERGY TRANSFER FROM 2,5-DISTYRYL PYRAZINE (DSP) AND 2,5-BIS 2(2-<br>NAPHTHYL) VINYL PYRAZINE (B2NVP) TO R6G   |           |
| <b>ABOU-ZIED O. (CANADA/EGYPT)</b>   | <b>14</b> |
| <b>P A13</b>   |           |
| STRUCTURES AND LASER INDUCED S <sub>2</sub> -S <sub>0</sub> FLUORESCENCE SPECTRA OF VAN<br>DER WAALS COMPLEXES OF AZULENE AND RELATED COMPOUNDS IN A<br>SUPersonic JET   |           |
| <b>AGOSTIANO A. (ITALY)</b>  | <b>15</b> |
| <b>P A14</b>   |           |
| CHARGE RECOMBINATION KINETICS OF PHOTOSYNTHETIC REACTION<br>CENTERS IN PHOSPHOLIPID ORGANIZED SYSTEMS  |           |
| <b>AHMED I. SADAT (EGYPT)</b>  | <b>17</b> |
| <b>P A15</b>   |           |
| THE EFFECT OF SUNLIGHT ON SOME EFFERVESCENT BEVERAGES IN THE<br>EGYPTIAN MARKET  |           |
| <b>AL-HASSAN K. A. (JORDAN)</b>  | <b>18</b> |
| <b>LEC</b>   |           |
| FREE VOLUME SENSING FLUORESCENCE "TICT" PROBES FOR CYCLODEXTRINS<br>INTERIOR   |           |
|  | <b>18</b> |

|  |           |
|--|-----------|
| <b>AL-JALLAL N. (KUWAIT)</b>   | <b>19</b> |
| <b>P A16</b>   |           |
| THE INFLUENCE OF METHOXY AND CYANO SUBSTITUENTS ON PHOTOCYCLOADDITION OF ETHENES TO NAPHTHALENES         |           |
| <b>ALI S. I. (INDIA)</b>   | <b>20</b> |
| <b>LEC</b>   |           |
| PHOTOEXCITATION OF TRANSITION METAL COMPLEXES IN ORGANIC SUBSTRATES                                      |           |
| <b>ALI S. S. (JAPAN/EGYPT)</b>   | <b>21</b> |
| <b>LEC</b>   |           |
| PECULIAR SPIN POLARIZATION IN THE PHOTOLYSIS OF SEVERAL Ni- AND Pt-COMPLEXES                             |           |
| <b>ALONSO-VANTE N. (GERMANY)</b>   | <b>23</b> |
| <b>LEC 31</b>  |           |
| THE SIGNIFICANCE OF SURFACE STATES FOR PHOTOELECTROCATALYSIS AT THE SEMICONDUCTOR/ELECTROLYTE INTERFACES |           |
| <b>ANTONIOUS M. S. (EGYPT)</b>   | <b>24</b> |
| <b>P A17</b>   |           |
| DEACTIVATION OF MULTIDIMENSIONAL S <sub>1</sub> -STATE OF SOME LASER DYES                                |           |
| <b>AQUILANTI V. (ITALY)</b>  | <b>25</b> |
| <b>LEC 18</b>  |           |
| NONADIABATIC ENERGY TRANSFER   |           |
| <b>AZUMI T. (JAPAN)</b>  | <b>26</b> |
| <b>LEC 12</b>  |           |
| STUDIES OF PHOTOCHEMICAL REACTIONS BY NUCLEAR SPIN POLARIZATION-DETECTED ESR SPECTROSCOPY                |           |
| <b>BABAQI A. S. (YEMEN)</b>  | <b>27</b> |
| <b>P A18</b>   |           |
| A NEW DIOLEFINIC LASER DYE: 2,5-BIS-2-(2-NAPHTHYL) VINYL PYRAZINE (B2NVP)                                |           |
| <b>BADAWI A. M. (EGYPT)</b>  | <b>28</b> |
| <b>P A19</b>   |           |
| TREATMENT OF WASTE WATER FROM REFINERIES BY OZONE/UV CATALYTIC PHOTOOXIDATION                            |           |

|   |           |
|---|-----------|
| <b>BADR Z. (EGYPT)</b>  | <b>29</b> |
| <b>LEC 11</b>   |           |
| PHOTOLYSIS AND PYRROLYSIS OF ACID AMIDES AND SULPHONAMIDES;<br>MECHANISTIC STUDIES  |           |
| <br><b>BILLING R. (GERMANY)</b>   | <b>30</b> |
| <b>LEC 43</b>   |           |
| SELECTIVE OXIDATION OF ALCOHOLS BY DIPHENYLIODONIUM IONS IN A<br>PHOTOINDUCED CHAIN REACTION  |           |
| <br><b>BOLTON J. (CANADA)</b>   | <b>31</b> |
| <b>LEC 46</b>   |           |
| SOLAR DETOXIFICATION OF WASTE WATER   |           |
| <br><b>BOXER STEVEN G. (USA)</b>  | <b>32</b> |
| <b>LEC 4</b>  |           |
| MECHANISM OF THE EARLY STEPS IN PHOTOSYNTHESIS  |           |
| <br><b>BRASLAVSKY S. (GERMANY)</b>  | <b>33</b> |
| <b>LEC 8</b>  |           |
| TIME-RESOLVED PHOTOTHERMAL MEASUREMENTS ON BIOLOGICAL<br>PHOTORECEPTORS   |           |
| <br><b>CALDWELL R. A. (USA)</b>   | <b>34</b> |
| <b>LEC</b>  |           |
| INTERSYSTEM CROSSING IN ORGANIC TRIPLET INTERMEDIATES   |           |
| <br><b>CALZAFERRI G. (SWITZERLAND)</b>  | <b>35</b> |
| <b>LEC 3</b>  |           |
| DYE MOLECULES IN ZEOLITES AS ARTIFICIAL ANTENNA SYSTEMS   |           |
| <br><b>DMITRU S.L. (RUSSIA)</b>   | <b>37</b> |
| <b>P A20</b>  |           |
| DYNAMICS OF BARRIERLESS STRUCTURAL RELAXATION OF EXCITED<br>PYRIDYLOXAZOLE CATIONS  |           |
| <br><b>DOEPP D. (GERMANY)</b>   | <b>39</b> |
| <b>LEC 42</b>   |           |
| REGIO- AND STEREOSELECTIVITY IN LIGHT INDUCED [4+2]-CYCLOADDITIONS<br>OF ALPHA-CYANOENAMINES TO AROMATIC CARBONYL COMPOUNDS,<br>NITRILES AND HYDROCARBONS |           |

|   |               |
|---|---------------|
| <b>DRUZHININ S. I. (RUSSIA)</b>   | <b>41</b>     |
| <b>P A21-22</b>   |               |
| 1- EXCITED STATE RELAXATION PROCESSES OF CROWNED STYRYL DYES AND<br>THEIR METAL COMPLEXES   |               |
| 2- TICT-STATE FORMATION DYNAMICS IN N-ALCOHOLS: N,N-<br>DIALKYLAMINONAPHTHALIMIDES  |               |
| <br><b>DUERR H. (GERMANY)</b>   | <br><b>45</b> |
| <b>LEC 41</b>   |               |
| MOLECULAR AND SUPRAMOLECULAR SYSTEMS IN PHOTOCHEMISM  |               |
| <br><b>EBEID E. (EGYPT)</b>   | <br><b>46</b> |
| <b>P A23</b>  |               |
| THE EMISSION CHARACTERISTICS AND PHOTOSTABILITY OF 1,4-BIS [2-<br>BENZOXAZOLYL) VINYL] BENZENE (BBVB) AND 1,4-BIS[BETA-(2-<br>QUINOLYL)VINYL]BENZENE (BQVB) |               |
| <br><b>EL-KEMARY M. (EGYPT)</b>   | <br><b>47</b> |
| <b>P A24</b>  |               |
| THE EMISSION, PHOTOSTABILITY AND COMPLEXATION ABILITY OF<br>TETRA-PHENYL-PORPHYRIN (TPP)  |               |
| <br><b>EL-NADI LOTFIA (EGYPT)</b>   | <br><b>48</b> |
| <b>P A25</b>  |               |
| LASER-INDUCED DISSOCIATION OF ORGANIC IODINE GASES  |               |
| <br><b>EREMENKO A. (UKRAINE)</b>  | <br><b>49</b> |
| <b>LEC 25</b>   |               |
| PHOTOINDUCED ELECTRON TRANSFER BETWEEN MOLECULES IN SILICA<br>MATRICES  |               |
| <br><b>FARA V. L. (ROMANIA)</b>   | <br><b>51</b> |
| <b>LEC 24</b>   |               |
| PHOTOPHYSICAL AND PHOTO CHEMICAL PROPERTIES OF DYE MOLECULES IN<br>POLYMERS USED FOR FLUORESCENT SOLAR CONCENTRATORS.                                       |               |
| <br><b>FASSLER D. (GERMANY)</b>   | <br><b>53</b> |
| <b>LEC 22</b>   |               |
| FLUORESCENCE LIFTIMES OF ADSORBED POLYMETHINES  |               |
| <br><b>FITZMAURICE D. (IRELAND)</b>   | <br><b>54</b> |
| <b>LEC 6</b>  |               |
| HETROSUPRAMOLECULAR CHEMISTRY: AN APPROACH TO MODULATING<br>FUNCTION IN MOLECULAR DEVICES.  |               |

|  |           |
|--|-----------|
| <b>FUJIMURA Y. (JAPAN)</b>   | <b>56</b> |
| <b>LEC 29</b>  |           |
| NUCLEAR WAVEPACKET STUDY OF UNIMOLECULAR REACTIONS IN<br>ULTRASHORT PULSED LASER   |           |
| <br><b>GEORGE, M. V. (INDIA)</b>   | <b>57</b> |
| <b>P B1</b>  |           |
| METAL RECOGNITION AND PHOTOSENSITIZING PROPERTIES OF NOVEL<br>SQUARAIN DYES  |           |
| <br><b>GIARDINI A. (ITALY)</b>   | <b>58</b> |
| <b>LEC 20</b>  |           |
| R2PI DETECTION AND SPECTROSCOPY OF VAN DER WAALS COMPLEXES OF 4-<br>FLUOROSTYRENE WITH RARE GASES                        |           |
| <br><b>GRAETZEL M. (ZWITZERLAND)</b>   | <b>59</b> |
| <b>LEC 1</b>   |           |
| NANOCRYSTALLINE SOLAR CELLS; SCIENTIFIC PRINCIPLES AND ECONOMIC<br>PERSPECTIVES  |           |
| <br><b>GREVELS F.-W. (GERMANY)</b>   | <b>60</b> |
| <b>LEC 35</b>  |           |
| PHOTOLYSIS OF GROUP 8 METAL CARBONYLS: TRANSIENT IR SPECTROSCOPY,<br>PHOTOKINETICS AND QUANTUM YIELDS OF CO SUBSTITUTION |           |
| <br><b>GUIDO DE GUIDI (ITALY)</b>  | <b>62</b> |
| <b>P B2</b>  |           |
| MOLECULAR MECHANISM OF PHOTOSENSITIZATION IN DNA   |           |
| <br><b>GUILLET, J. (CANADA)</b>  | <b>63</b> |
| <b>LEC 2</b>   |           |
| SOLAR SYNTHESIS OF HYDROGEN PEROXIDE   |           |
| <br><b>HAFIZ M. M. (EGYPT)</b>   | <b>64</b> |
| <b>P B3</b>  |           |
| CHARACTERISTICS OF Si-As-Cu SOLAR CELLS  |           |
| <br><b>HARRIMAN A. (FRANCE)</b>  | <b>65</b> |
| <b>LEC 47</b>  |           |
| PHOTOCHEMOTHERAPY WITH CYANINE DYES  |           |
| <br><b>HAU DOU-MONG (TAIWAN, CHINA)</b>  | <b>66</b> |
| <b>LEC 36</b>  |           |
| PHOTOCHEMOTHERAPY ON EXPERIMENTAL TUMOR WITH PHOTOFRIN II AND<br>LASER   |           |

|  |           |
|--|-----------|
| <b>HILL CRAIG L. (USA)</b>   | <b>67</b> |
| <b>LEC 7</b>   |           |
| EXCITED STATE CHARACTERISTICS AND NEW UNACTIVATED C-H BOND<br>FUNCTIONALIZATION PHOTOCATALYSIS BY $W_{10}O_{32}^{4-}$  |           |
| <b>HOFFMAN M. Z. (USA)</b>   | <b>68</b> |
| <b>LEC 14</b>  |           |
| ELECTROLYTE AND TEMPERATURE EFFECTS IN PHOTOINDUCED INTER-MOLECULAR ELECTRON-TRANSFER REACTIONS  |           |
| <b>KADASHCHUK A. (UKRAINE)</b>   | <b>69</b> |
| <b>P B4</b>  |           |
| THE ROLE OF DOPANT DIPOLE MOMENTS ON CHARGE TRANSPORT BEHAVIOR<br>IN MOLECULARLY DOPED POLYMERS  |           |
| <b>KAMBER IVO (ZWITZERLAND)</b>  | <b>70</b> |
| <b>P B5</b>  |           |
| PHOTOCHEMISTRY AT HIGH TEMPERATURES: INTERACTION OF ZnO WITH<br>POSSIBLE PRODUCTS OF $CO_2$ REDUCTION  |           |
| <b>KARRARAH M. A. (EGYPT)</b>  | <b>71</b> |
| <b>P B6-8</b>  |           |
| 1- COMPARATIVE ELECTRON MICROSCOPY BETWEEN HYphae FROM YOUNG<br>AND OLD CULTURES OF GAEUMANNOMYCES GRAMINIS V. TRITICI, THE TAKE-<br>ALL PATHOGEN OF WHEAT                       |           |
| 2- EFFECT OF INFECTION WITH GAEUMANNOMYCES GRAMINIS V. TRITICI ON<br>WATER ECONOMY IN WHEAT PLANT USING LEAD CHELATE METHOD  |           |
| 3- FINE STRUCTURE OF THE PRIMARY ROOT OF WHEAT INFECTED WITH<br>GAEUMANNOMYCES GRAMINIS V. TRITICI   |           |
| <b>KHAN M. K. A. (BANGLADESH)</b>  | <b>74</b> |
| <b>LEC</b>   |           |
| STUDY OF A $Cu_2O$ BASED PHOTOELECTROCHEMICAL SOLAR CELLS  |           |
| <b>KORPI-TOMMOLA J. (FINLAND)</b>  | <b>75</b> |
| <b>LEC 37</b>  |           |
| SELFORGANIZATION OF CHLOROPHYLLS IN HYDROCARBON SOLUTION AND IN<br>VIVO SYSTEMS: PICO- AND FEMTOSECOND RELAXATION IN WATER BOUND<br>CHLA AGGREGATES AND CL. TEPIDUM CHLOROSOMES. |           |
| <b>KOSSANYI J. (FRANCE)</b>  | <b>76</b> |
| <b>LEC 28</b>  |           |
| UNUSUALLY STRONG EMISSION FROM EXCIPLEXES FORMED BETWEEN<br>BENZENOID SOLVENTS AND DIBENZOYLMETHANATBORON DIFLUORIDE   |           |

|  |    |
|--|----|
| KRISHNAN V. (INDIA)  | 77 |
| LEC 17   |    |
| NON-PLANAR PORPHYRIN MOLECULAR ASSEMBLIES  |    |
| KURRECK H. (GERMANY)   | 78 |
| LEC 15   |    |
| MIMICKING PRIMARY PROCESSES OF PHOTOSYNTHESIS MODEL COMPOUNDS,<br>LIGHT-INDUCED CHARGE SEPARATION.       |    |
| LEUPOLD D. (GERMANY)   | 79 |
| LEC 14   |    |
| CHARACTERIZATION OF PHOTOSYNTHETIC ANTENNAS BY NONLINEAR<br>POLARIZATION SPECTROSCOPY (FREQUENCY DOMAIN) |    |
| LOEHMANNSROEBEN H.G. (GERMANY)   | 80 |
| LEC 30   |    |
| FLUORESCENCE OF POLYNUCLEAR AROMATIC COMPOUNDS AND MINERAL<br>OILS IN ENVIRONMENTAL MONITORING           |    |
| LOUTFY R.O. (CANADA)   | 81 |
| LEC 13   |    |
| A NON-SILVER DRY-PROCESSED PHOTOGRAPHIC ARTS FILM  |    |
| MAHMOUD A. H. H. (EGYPT)   | 82 |
| P B9   |    |
| INTEGRATED TECHNOLOGY FOR DESERT FARMING WITH SOIL CONDITIONER<br>"RAPG"                                 |    |
| MALINKA E. A. (UKRAINE)  | 83 |
| P B10  |    |
| MECHANISM OF PHOTOCATALYTIC HYDROGEN PRODUCTION IN THE<br>Pt/TiO <sub>2</sub> /OXALIC ACID SYSTEM        |    |
| MALINKA E. (UKRAINE)   | 84 |
| P B11  |    |
| PHOTOINDUCED OXIDATION OF PYROCATECHOL OVER TITANIUM DIOXIDE   |    |
| MAZZUCATO UGO (ITALY)  | 85 |
| LEC 10   |    |
| PHOTOCHEMICAL MATERIALS: A COMPREHENSIVE KINETIC THERMO-DYNAMIC<br>AND PHOTOCHEMICAL STUDY               |    |
| MEL'NIKOV M. (RUSSIA)  | 86 |
| LEC 40, P B12 or 13  |    |
| 1- PHOTORADICAL AGEING OF SOLID POLYMERS   |    |
|  | 24 |

|   |            |
|---|------------|
| 2- PHOTOINDUCED INTRAMOLECULAR CHARGE SEPARATION IN MIXED LIGAND DITHIOLATO- $\alpha$ - $\alpha'$ -DIIMINE ZINC COMPLEXES |            |
| <b>MELE A. (ITALY)</b>  | <b>89</b>  |
| <b>P B14</b>  |            |
| PULSED LASER ABLATION: THIN FILM PRODUCTION AND COATING, PROCESS DIAGNOSTICS  |            |
| <b>MOHAMED S. K. (EGYPT)</b>  | <b>90</b>  |
| <b>P B15</b>  |            |
| PHOTOLYSIS OF TRIAZENE-1-OXIDES   |            |
| <b>MOLL J. (GERMANY)</b>  | <b>92</b>  |
| <b>P B16</b>  |            |
| THE DYNAMICS OF EXCITONS IN THE J-AGGREGATES OF A CARBOCYANINE DYE  |            |
| <b>MORRISON H. A. (USA)</b>   | <b>93</b>  |
| <b>LEC 26</b>   |            |
| PHOTOCHEMICAL REARRANGEMENTS OF OXAZRINDINES  |            |
| <b>MOURAD E. A. (EGYPT)</b>   | <b>94</b>  |
| <b>P B17</b>  |            |
| PHOTOCHEMICAL SYNTHESIS OF TETRABRIDGED CYCLOPHAN   |            |
| <b>NADA A. A. (EGYPT)</b>   | <b>95</b>  |
| <b>P B18</b>  |            |
| THE PHOTOCHEMICAL REACTION OF DIBROMO-N-METHYLMALEIMIDE WITH 1-PHENYL-2-METHYL-1,2-DIHYDRO-3,6-PYRIDAZINEDITHIONE         |            |
| <b>NASR CHOUHAID (CANADA)</b>   | <b>96</b>  |
| <b>P B19-20</b>   |            |
| 1- PHOTOELECTROCHEMICAL BEHAVIOR OF COUPLED $\text{SnO}_2/\text{CdSe}$ SEMICONDUCTOR FILMS                                |            |
| 2- LOW FREQUENCY CAPACITANCE MEASUREMENTS OF ALUMINUM/MICROCRYSTALLINE CHLOROPHYLL $a$ /SILVER SANDWICH CELLS             |            |
| <b>NAVIO J. A. (SPAIN)</b>  | <b>100</b> |
| <b>LEC</b>  |            |
| PHOTODEGRADATION OF BUTYLTIN COMPOUNDS IN WATER: ENVIRONMENTAL IMPLICATIONS   |            |

|  |            |
|--|------------|
| <b>OKSANEN J. A.I. (FINLAND)</b>   | <b>101</b> |
| <b>P B21</b>   |            |
| FEMTOSECOND KINETICS OF CHLOROPHYLL $\alpha$ AGGREGATES AND<br>CHLOROSOMES   |            |
| <b>OPPENLAENDER Th. (GERMANY)</b>  | <b>102</b> |
| <b>LEC 5</b>   |            |
| NOVEL VACUUM-UV-(VUV) AND UV-EXCIMER FLOW THROUGH<br>PHOTORECTORS FOR WAST WATER TREATMENT AND FOR WAVELENGTHS<br>SELECTIVE PHOTOCHEMISTRY |            |
| <b>OZANAM F. (FRANCE)</b>  | <b>104</b> |
| <b>LEC 32</b>  |            |
| IN-SITU INFRARED STUDY OF THE INTERFACIAL LAYER DURING THE ANODIC<br>DISSOLUTION OF A SILICON ELECTRODE IN A FLUORIDE ELECTROLYTE          |            |
| <b>PARKANYI CYRIL (USA)</b>  | <b>105</b> |
| <b>P B22</b>   |            |
| PHOTOLYSIS OF HETEROCYCLIC PESTICIDES  |            |
| <b>RAMADAN H. (EGYPT)</b>  | <b>106</b> |
| <b>P B23</b>   |            |
| NONRESONANT TRANSFER EXCITATION COLLISION OF $\text{Ca}^{17+}$ WITH He   |            |
| <b>RUSALOV M. V. (RUSSIA)</b>  | <b>107</b> |
| <b>P B24</b>   |            |
| EXCITED STATE DEACTIVATION OF CROWDED 7-AMINOCOUMARINS   |            |
| <b>SAUER ERIKA (GERMANY)</b>   | <b>109</b> |
| <b>P B25</b>   |            |
| NON-RECIPROCITY PHOTOCHEMICAL BEHAVIOUR OF NEW 1,2-NAPHTHO-<br>QUINONE -(2)-DIAZO-SULFONIC ACID ESTERS                                     |            |
| <b>SONG PILL-SOON (USA)</b>  | <b>111</b> |
| <b>LEC 21</b>  |            |
| PHYTOCHROME AS LIGHT SENSOR FOR PHOTOSYNTHETIC GENE ACTIVATION   |            |
| <b>SPANHEL Lubomir (GERMANY)</b>   | <b>113</b> |
| <b>LEC 44</b>  |            |
| SOL-GEL SYNTHESIS AND SPECTROSCOPIC PROPERTIES OF NANOSCALED<br>HYBRID MATERIALS   |            |
| <b>TAYEB A. (EGYPT)</b>  | <b>114</b> |
| <b>P B25</b>   |            |
| USE OF SOME INDUSTRIAL BY-PRODUCTS AS ENERGY STORAGE MEDIA   |            |

|   |            |
|---|------------|
| <b>TERENETSKAYA I. (UKRAINE)</b>  | <b>115</b> |
| <b>LEC 39, 116 P B26</b>  |            |
| 1- AN IN VITRO MODEL OF PREVITAMIN D PHOTOSYNTHESIS AS POSSIBLE MONITOR OF SOLAR UVB RADIATION: KINETIC STUDIES USING TUNABLE LASER |            |
| 2- THE PROBLEM OF LIGHT SOURCE IN VITAMIN D INDUSTRIAL SYNTHESIS: LAMP, LASER OR SUN  |            |
| <b>TESTA A. C. (USA)</b>  | <b>117</b> |
| <b>LEC 9</b>  |            |
| PHOTOINDUCED PROTON TRANSFER IN SUBSTITUTED PYRIDINES   |            |
| <b>TOLBERT L. M. (USA)</b>  | <b>118</b> |
| <b>LEC 34</b>   |            |
| EXCITED-STATE PROTON TRANSFER IN CONSTRAINED ENVIRONMENT  |            |
| <b>UZHINOV B.M. (RUSSIA)</b>  | <b>119</b> |
| <b>LEC 38 P B27 or 28</b>   |            |
| 1- EXCITED STATE PROTON TRANSFER LASERS   |            |
| 2- RADIATIONLESS DEACTIVATION AT INTERMOLECULAR EXCITED STATE PROTON TRANSFER OF 2,4,6-TRIARYLPYRIDINES                             |            |
| <b>WAGNER PETER J. (USA)</b>  | <b>122</b> |
| <b>LEC</b>  |            |
| TRIPLET STATE RADICAL CLEAVAGE OF RING SUBSTIUENTS ON PHENYL KETONES: DIFFERENT MODES FOR DIFFERENT ELECTRONIC STATES               |            |
| <b>WILLIG F. (GERMANY)</b>  | <b>123</b> |
| <b>LEC</b>  |            |
| INJECTION AND DISCHARGE OF PHOTO-GENERATED CHARGE CARRIERS AT THE SEMICONDUCTOR/ELECTROLYTE INTERFACE                               |            |
| <b>WULFMAN CARL (USA)</b>   | <b>124</b> |
| <b>LEC</b>  |            |
| CATASTROPHIC POLARIZATION OF TWISTED EXCITED STATES   |            |
| <b>YANAGIDA SHOZO (JAPAN)</b>   | <b>125</b> |
| <b>LEC</b>  |            |
| PHENAZINE-PHOTOSENSITIZED REDUCTION OF CO <sub>2</sub> MEDIATED BY COBALT CYCLAM COMPLEXES  |            |

**ZACHARIASSE K. (GERMANY)** **126**  
**LEC 23**  
INFLUENCE OF ENERGY GAP DELTA E(S<sub>1</sub>,S<sub>2</sub>) AND AMINO N-INVERSION IN INTRAMOLECULAR CHARGE TRANSFER. DUAL FLUORESCENCE AND SINGLE CT-EMISSION

**ZENKEVICH E. I. (BELARUS)** **127**  
**LEC 19, 128 P B29**  
1- DIPOLE-DIPOLE AND EXCHANGE ENERGY TRANSFER IN DIFFERENT TYPES OF PORPHYRIN CHEMICAL DIMERS  
2-ENERGY AND ELECTRON TRANSFER PROCESSES IN SELF-ORGANIZED PORPHYRIN AND CHLORIN TRIADIC AND PENTADIC COMPLEXES

**ZIMMERMAN H. E. (USA)** **129**  
**LEC 27**  
RECENT ADVANCES IN MECHANISTIC AND EXPLORATORY ORGANIC PHOTOCHEMISTRY

### **LAST MINUTE REGISTRATION**

**ABDEL-FATTAH M. (EGYPT)** **131**  
**P A26**  
1-IMPROVEMENT OF HYDROGEN GENERATION BY SURFACE MODIFICATION OF SEMICONDUCTOR ELECTRODE  
2- A MODEL FOR THE CURRENT-VOLTAGE CURVE OF PHOTO-EXCITED SILICON ELECTRODE

**ABDEL-LATIF F. (EGYPT)** **133**  
**P B30**  
FORMATION OF 1,1-DIMETHYL 1- $\gamma$ -CYANINE IODIDE FROM QUINALDINIUM METHIODIDE UNDER SOLAR AND ULTRAVIOLET ILLUMINATION

**AMER A. M. (EGYPT)** **134**  
**P A27**  
FLUORESCENCE PROPERTIES OF EMODINE DERIVATIVES

**HAFIZ M. M. (EGYPT)** **135**  
**P A28**  
OPTIMIZATION OF METAL THICKNESS USED IN SCHOTTKY BARRIER SILICON SOLAR CELL

**MANSOUR A. F. (EGYPT)** **136**  
**P A29**  
OPTICAL STUDIES OF SOME DYES AS LUMINESCENT SOLAR COLLECTORS

|   |     |
|---|-----|
| SALIM A. I. (EGYPT)   | 137 |
| <b>P B31</b><br>STUDY OF THE INCOMING INFRA-RED (IR) SOLAR RADIATION AT CAIRO,<br>EGYPT   |     |
| TEGHIL R. (ITALY)   | 138 |
| <b>P A30</b><br>PULSED LASER ABLATION: THIN FILM PRODUCTION AND COATING; PROCESS<br>DIAGNOSTICS   |     |
| ETMAN M. (FRANCE)   | 139 |
| <b>LEC 33, PA31</b><br>1- STUDIES ON ANODIC DISSOLUTION OF SILICON ELECTRODES IN FLUORIDE<br>MEDIA IN DARKNESS AND UNDER ILLUMINATION<br>2- INTEREST OF IMPEDANCE SPECTROSCOPY TECHNIQUES FOR CORROSION<br>MECHANISM INVESTIGATIONS |     |
| MAYHOUB A. B. (EGYPT)   | 142 |
| <b>PA32</b><br>MODELLING DIFFUSE SOLAR RADIATION USING THREE DIFFERENT<br>APPROACHES  |     |
| HASSAN M. F. (EGYPT)  | 143 |
| <b>PA33</b><br>CURRENT FLOW IN CdS/Si HETEROJUNCTION SOLAR CELL   |     |

12/21/94 10:28 PM

**LIST OF INTERNATIONAL PARTICIPANTS**

|                            |                     |
|----------------------------|---------------------|
| <b>ABD-EL-AZIZ Alaa S.</b> | <b>CANADA</b>       |
| <b>ABDEL-AZIZ A.</b>       | <b>CANADA</b>       |
| <b>ABDEL-AZIZ V.</b>       | <b>CANADA</b>       |
| <b>ABOU-ZIED O.</b>        | <b>CANADA/MAROC</b> |
| <b>AGOSTIANO A.</b>        | <b>ITALY</b>        |
| <b>AL-HASSAN K. A.</b>     | <b>JORDAN</b>       |
| <b>AL-JALLAL A.</b>        | <b>KUWAIT</b>       |
| <b>AL-JALLAL N.</b>        | <b>KUWAIT</b>       |
| <b>ALI, S. I.</b>          | <b>INDIA</b>        |
| <b>ALLAF A.</b>            | <b>SYRIA</b>        |
| <b>ALONSO-VANTE N.</b>     | <b>GERMANY</b>      |
| <b>AZUMI Tohru</b>         | <b>JAPAN</b>        |
| <b>BILLING</b>             | <b>GERMANY</b>      |
| <b>BILLING R.</b>          | <b>GERMANY</b>      |
| <b>BOLTON J.</b>           | <b>CANADA</b>       |
| <b>BOXER STEVEN G.</b>     | <b>USA</b>          |
| <b>BRASLAVSKY S.</b>       | <b>GERMANY</b>      |
| <b>CALDWELL R. A.</b>      | <b>USA</b>          |
| <b>CALZAFERRI E.</b>       | <b>SWITZERLAND</b>  |
| <b>CALZAFERRI G.</b>       | <b>SWITZERLAND</b>  |
| <b>DMITRUK S. L.</b>       | <b>RUSSIA</b>       |
| <b>DOEPP D.</b>            | <b>GERMANY</b>      |
| <b>DRUZHININ Sergei I.</b> | <b>RUSSIA</b>       |
| <b>DUERR H.</b>            | <b>GERMANY</b>      |
| <b>DURRANT J.</b>          | <b>ENGLAND</b>      |
| <b>EREMENKO A.</b>         | <b>UKRAINE</b>      |
| <b>ETMAN M.</b>            | <b>FRANCE</b>       |
| <b>FARA V.L.</b>           | <b>ROMANIA</b>      |
| <b>FASSLER D.</b>          | <b>GERMANY</b>      |
| <b>FASSLER R.</b>          | <b>GERMANY</b>      |

|                    |                  |
|--------------------|------------------|
| FITZMAURICE D.     | IRELAND          |
| FUJIMURA Y.        | JAPAN            |
| GEORGE, M.V.       | INDIA            |
| GETOFF Nikola      | AUSTRIA          |
| GIARDINI ANNA      | ITALY            |
| GRAETZEL M.        | SWITZERLAND      |
| GREVELS F.-W.      | GERMANY          |
| GUIDO DE GUIDI     | ITALY            |
| GUILLET H.         | CANADA           |
| GUILLET J.         | CANADA           |
| HANSONGNEM K.      | Thailand         |
| HARRIMAN A.        | FRANCE           |
| HAU DOU-MONG       | Taiwan, R. CHINA |
| HAVEL JOSEF        | CZECH R.         |
| HILL Craig L.      | USA              |
| HOFFMAN M. Z.      | USA              |
| KADASHCHUK A.      | UKRAINE          |
| KAMBER, Ivo        | SWITZERLAND      |
| KHAN M. K. A.      | BANGLADESH       |
| KORPI-TOMMOLA H.   | FINLAND          |
| KORPI-TOMMOLA J.   | FINLAND          |
| KORPI-TOMMOLA M.   | FINLAND          |
| KORPI-TOMMOLA S.   | FINLAND          |
| KOSSANYI J.        | FRANCE           |
| KRISHNAN V.        | INDIA            |
| KURRECK H.         | GERMANY          |
| LEUPOLD D.         | GERMANY          |
| LOEHMANNSROEBEN H. | GERMANY          |
| LOUTFY R. O.       | CANADA           |
| MALINKA E.         | UKRAINE          |
| MALINKA E. A.      | UKRAINE          |
| MAZZUCATO UGO      | ITALY            |
| MEL'NIKOV M.       | RUSSIA           |
| MORRISON H.        | USA              |

|                    |             |
|--------------------|-------------|
| MORRISON HARRY A.  | USA         |
| NASR Chouhaid      | CANADA      |
| NAVIO J. A.        | SPAIN       |
| OKSANEN JARI A.I.  | FINLAND     |
| OPPENLAENDER B.    | GERMANY     |
| OPPENLAENDER Th.   | GERMANY     |
| OZANAM F.          | FRANCE      |
| PARK Koon Ha       | KOREA       |
| PARKANYI CYRIL     | USA         |
| PRIETO MANUEL      | PORTUGAL    |
| SAUER Erika        | GERMANY     |
| SEROPEGINA E. N.   | RUSSUIA     |
| SMITH GERALD       | NEW ZEALAND |
| SONG PILL-SOON     | USA         |
| SONG (Wife)        | USA         |
| SONG (Daughter)    | USA         |
| SPANHEL Lubomir    | GERMANY     |
| TANIELLAN C.       | FRANCE      |
| TEGHILL R.         | ITALY       |
| TERENETSKAYA IRENA | UKRAINE     |
| TESTA Helga        | USA         |
| TESTA Anthony C.   | USA         |
| TOLBERT LAREN M.   | USA         |
| TOLBERT Sara       | USA         |
| UZHINOV B.M.       | RUSSIA      |
| YANAGIDA SHOZO     | JAPAN       |
| ZACHARIASSE K.     | GERMANY     |
| ZENKEVICH E. I.    | BELARUS     |
| ZIMMERMAN H. E.    | USA         |

## LIST OF EGYPTIAN PARTICIPANTS

|                       |                               |
|-----------------------|-------------------------------|
| Abdel-Aziz A. A.      | Chem Dept Ain Shams Univ      |
| Abdel-Bary E. M.      | Chem Dept Mansorah Univ       |
| Abdel-Dayem H.        | Chem Dept Ain Shams Univ      |
| Abd Elhafeez A.       | Chem Dept El-Minia Univ       |
| Abdel-Fattah M.       | Higher Tech Inst 10th Ramadan |
| Abdel-Halim A. M.     | Chem Dept Ain Shams Univ      |
| Abdel-Halim M. S.     | Chem Dept/Eng ASU             |
| Abdel-Halim S.        | Phys Dept Ain Shams Univ      |
| Abdel-Halim S. H.     | Chem Dept Ain Shams Univ      |
| Abdel-Hamid H. A.     | Chem Dept Ain Shams Univ      |
| Abdel-Khalik M.       | Chem Dept Ain Shams Univ      |
| Abdel-Latif F. M.     | Chem Dept Aswan Univ          |
| Abdel-Messih M. F.    | Chem Dept Ain Shams Univ      |
| Abdel-Mottaleb M.S.A. | Chem Dept Ain Shams Univ      |
| Abdel-Razik E. A.     | Chem Dept Mansourah Univ      |
| Abdel-Raouf M. A.     | Phys Dept Ain Shams Univ      |
| Abdel-Rehiem S.S.     | Chem Dept Ain Shams Univ      |
| Abdel-Rehim F.        | Chem Dept Ain Shams Univ      |
| Abdel-Samad Hesham S. | Chem Dept Ain Shams Univ      |
| Abdel-Shafi Ayoub     | Chem Dept ASU/England         |
| Abdel-Wahab A. A.     | Chem Dept Assiut Univ         |
| Abdel-Wahaab S. M.    | Chem Dept Ain Shams Univ      |
| Abdou Wafaa           | Nat Res Centre                |
| Abo-Aly M M           | Chem Dept Ain Shams Univ      |
| Abo-Farha S. A.       | Chem Dept AlAzhar/Girls       |
| Abou-Elnour Faried    | Atomic Energy Authority       |
| Abou-Elzahab M.       | Chem Dept El-Mansoura Uni     |
| Abou-Gamra Zeinab     | Chem Dept Ain Shams Univ      |
| Abou-Zied K. A.       | Chem Dept Tanta Univ          |

|                      |                              |
|----------------------|------------------------------|
| Ali K. Ali           | Chem Dept Ain Shams Univ     |
| Ali Tarek A.         | Phys Dept Ain Shams Univ     |
| Al-Hazmy S. M.       | Chem Dept Tanta Univ         |
| Amer Atef            | Chem Dept Zagazig Univ       |
| Antonious M S        | Chem Dept Ain Shams Univ     |
| Attia S. A.          | Chem Dept Ain Shams Univ     |
| Azim S. A.           | Chem Dept Tanta Univ         |
| Azzam A. M.          | Chem Dept Ain Shams Univ     |
| Ayoub S. N.          | Chem Dept Ain Shams Univ     |
| Badawi A. M.         | Petroleum Res Institute      |
| Badawy N. A.         | Chem Dept Al-Azhar Girls     |
| Badr M. Z.           | Chem Dept Assiut Univ        |
| Bahgat A. A.         | Phys Dept Al-Azhar Univ      |
| Bakry Assem          | Phys Dept Ain Shams Univ     |
| Bassily I. K.        | Chem Dept Mansorah Univ      |
| Barakat N.           | Phys Dept Ain Shams Univ     |
| Bayoumi Abdel-Hameed | Military Tech. Collage       |
| Boraie W. E.         | Chem Dept Ain Shams Univ     |
| Derbala H. A.        | Chem Dept Ain Shams Univ     |
| Dessouki A. M.       | Nat C Rad Res Tech (NCRRT)   |
| Ebeid E. M.          | Chem Dept Tanta Univ         |
| Ebraheem S.          | Nat C Rad Res Tech (NCRRT)   |
| El-Aasar N. K.       | Chem Dept Ain Shams Univ     |
| El-Adly Refaat       | Petroleum Research Institute |
| El-Bassiony F. A.    | Chem Dept Ain Shams          |
| El-Batanouny M. M.   | Fac Medicine Cairo Univ      |
| El-Bordainy Eman     | Chem Dept Ain Shams Univ     |
| El-Botanie M.        | Desert Res Institute         |
| El-Daly H.           | Chem Dept Tanta Univ         |
| El-Farargy A. F.     | Chem Dept Zagazig Univ       |
| El-Fass M. M.        | Chem Dept Al-Azhar UGirls    |
| El-Gendy N.          | Atomic Energy Authority      |
| El-Ghandoor Hatem    | Phys Dept Ain Shams Univ     |
| El-Hosiny F. I.      | Chem Dept Ain Shams Univ     |

|                           |  |
|---------------------------|--|
| <b>El-Khodary Olfat</b>   | <b>NILES, Cairo Univ</b>               |
| <b>Elissa L.</b>          | <b>Phys Dept Ain Shams Univ</b>        |
| <b>El-Kafrawy A. F.</b>   | <b>Chem Dept Ain Shams Univ</b>        |
| <b>El-Kasaby M. A.</b>    | <b>Chem Dept Ain Shams Univ</b>        |
| <b>El-Kemary M.</b>       | <b>Fac Edu Kafr El-Sheakh</b>          |
| <b>El-Khamry A. A.</b>    | <b>Chem Dept Ain Shams Univ</b>        |
| <b>El-Khoshnia Y. O.</b>  | <b>Nat. Res. Center</b>                |
| <b>El-Khouly M. E.</b>    | <b>Chem Dept Tanta Univ</b>            |
| <b>El-Kousy M. A.</b>     | <b>Egyptian Army</b>                   |
| <b>El-Medani Samir M.</b> | <b>Fac Edu El-Fayoum</b>               |
| <b>El-Manakhly K. A.</b>  | <b>Phys Dept Al-Azhar Univ</b>         |
| <b>Elmorsy S. S.</b>      | <b>Chem Dept Mansoura Univ</b>         |
| <b>El-Mously M.</b>       | <b>Phys Dept Ain Shams Univ</b>        |
| <b>El-Nadi Lotfia</b>     | <b>NILES &amp;Phys Dept Cairo Univ</b> |
| <b>El-Nagdy E. I.</b>     | <b>Chem Dept Ain Shams Univ</b>        |
| <b>El-Naggar Ahmed</b>    | <b>Phys Dept Ain Shams Univ</b>        |
| <b>El-Rafei Sh.</b>       | <b>Nat Res Centre/Chem Eng.</b>        |
| <b>El-Sabbagh I.A.</b>    | <b>Chem Dept Al-Azhar U Girls</b>      |
| <b>El-Sadafy Asem</b>     | <b>Phys Dept Ain Shams Univ</b>        |
| <b>El-Sayed B. A.</b>     | <b>Chem Dept Al-Azhar Univ</b>         |
| <b>El-Sayed G. A.</b>     | <b>Chem Dept Ain Shams Univ</b>        |
| <b>El-Sayed F. A.</b>     | <b>Chem Dept Ain Shams Univ</b>        |
| <b>El-Sayed G. H.</b>     | <b>Chem Dept Ain Shams Univ</b>        |
| <b>El-Sayed H.</b>        | <b>Phys Dept Ain Shams Univ</b>        |
| <b>El-Sayed M. E.</b>     | <b>Phys Dept Ain Shams Univ</b>        |
| <b>El-Sayed S. A.</b>     | <b>Chem Dept Ain Shams Univ</b>        |
| <b>El-Shafei Azza .</b>   | <b>Botany Dept Ain Shams Univ</b>      |
| <b>El-Shafei G. M.</b>    | <b>Chem Dept Ain Shams Univ</b>        |
| <b>El-Shahat M. F.</b>    | <b>Chem Dept Ain Shams Univ</b>        |
| <b>El-Shahed F. A.</b>    | <b>Chem Dept Seuz Canal Uni</b>        |
| <b>El-Sharkawy M.</b>     | <b>Phys Dept Ain Shams Univ</b>        |
| <b>El-Shobaky E.</b>      | <b>Math Dept Ain Shams Univ</b>        |
| <b>El-Zawawy F.</b>       | <b>Chem Dept Ain Shams Univ</b>        |
| <b>Emam M. M. A.</b>      | <b>Phys Dept Ain Shams Univ</b>        |

|                  |                              |
|------------------|------------------------------|
| Emara M. M.      | Chem Dept Al Azhar Univ      |
| Ezzo Essam M.    | Chem Dept Fac Girls (ASU)    |
| Fahim Fawzia A.  | Biochem Dept ASU             |
| Fahmy F.         | Chem Dept Ain Shams Univ     |
| Farid M.A.       | Electronics/Eng. ASU         |
| Farid Nour       | Maths Dept Ain Shams Univ    |
| Fawzi Hossam     | Chem Dept Ain Shams Univ     |
| Gharieb H. K.    | Petroleum Research Institute |
| Gomaa M. A.      | Chem Dept El-Minia Univ      |
| Guindy N.M.      | Chem Dept Ain Shams Univ     |
| Guirguis D. B.   | Chem Dept Ain Shams UNiv     |
| Habashy M.M.     | Chem Dept Ain Shams Univ     |
| Hafiz M. M.      | Phys Dept Assiut Univ        |
| Hamad A. S.      | Chem Dept Ain Shams Univ     |
| Hamed A. A.      | Chem Dept Ain Shams Univ     |
| Hammad H. A.     | Chem Dept Al-Azhar Univ      |
| Hamza M.S.       | Chem Dept Ain Shams Univ     |
| Hanafi S.        | Chem Dept Ain Shams Univ     |
| Hashem A. I      | Chem Dept Ain Shams Univ     |
| Hashem K.        | Chem Dept Ain Shams Univ     |
| Hassan H. H.     | Chem Dept Ain Shams Univ     |
| Hassan M. A.     | Chem Dept Ain Shams Univ     |
| Hassan M. E.     | Chem Dept Aswan Univ         |
| Hassan M. F.     | Military Tech. College       |
| Hassan S. A.     | Chem Dept Ain Shams Univ     |
| Hassan S. S.     | Chem Dept Ain Shams Univ     |
| Hassanein Raifa  | Botany Dept Ain Shams Univ   |
| Hegazi A. A.     | NCRRT                        |
| Hegazi I. A.     | Chem Dept Ain Shams Univ     |
| Hekal E. E.      | Chem Dept Ain Shams Univ     |
| Hussein Sayed S. | NILES, Cairo Univ            |
| Ibrahim A. M. A. | Chem Dept Ain Shams Univ     |
| Ibrahim M. A.    | Chem Dept Ain Shams Univ     |
| Iskander M. L.   | Chem Dept Ain Shams Univ     |

|                   |                              |
|-------------------|------------------------------|
| Ismail M. F.      | Chem Dept Ain Shams Univ     |
| Ismail M. I.      | Chem Dept Ain Shams Univ     |
| Kaddah A. M.      | Chem Dept Ain Shams Univ     |
| Kamel M.          | Nat. Res. Centre             |
| Kamel Nagi        | Phys Dept Ain Shams Univ     |
| Kandel K. A.      | Chem Dept Ain Shams Univ     |
| Kandil M. Kandil  | Phys Dept Ain Shams Univ     |
| Kandile N. G.     | Univ College/Women (ASU)     |
| Karrarah M. A.    | Fac Agriculture Cairo Univ   |
| Khalil A. M.      | Chem Dept Ain Shams Univ     |
| Khalil L. H.      | Chem Dept Ain Shams Univ     |
| Khalil M. M. H.   | Chem Dept Ain Shams Univ     |
| Kotkata M. F.     | Phys Dept Ain Shams Univ     |
| Madkour H. M.     | Chem Dept Ain Shams Univ     |
| Mahmoud A. H. H.  | Fac Agriculture AlAzhar Univ |
| Mahmoud M. R.     | Chem Dept Ain Shams Univ     |
| Mahmoud W. H.     | Chem Dept Ain Shams Univ     |
| Mansour A. F.     | Phys Dept Zagazig Univ       |
| Marzouk Magda I.  | Chem Dept Ain Shams Univ     |
| Marzouk S.A.      | Chem Dept Ain Shams Univ     |
| Mayhoub A. B      | Atomic Energy Authority      |
| Medhat M. A.      | Phys Dept Ain Shams Univ     |
| Median H. A. A.   | Chem Dept Ain Shams Univ     |
| Milad N. E.       | Chem Dept Ain Shams Univ     |
| Mina Nagy         | Phys Dept Ain Shams Univ     |
| Mohamed Aisha A.  | Chem Dept Ain Shams Univ     |
| Mohamed M. M. M.  | Chem Dept Ain Shams Univ     |
| Mohammed S. K.    | Chem Dept El-Minia Univ      |
| Mohsen Mona       | Phys Dept Ain Shams Univ     |
| Mostafa O. E.     | Chem Dept Ain Shams Univ     |
| Mourad A. E.      | Chem Dept El-Minia Univ      |
| Mourad Wedad      | Nat Res Centre               |
| Mousa A. M.       | Chem Dept Ain Shams Univ     |
| Moustafa Seham M. | Botany Dept ASU              |

|                   |                            |
|-------------------|----------------------------|
| Nada A. A.        | National Research Centre   |
| Naguib Y. M.      | Seuz Canal Univ/AI-Ariesh  |
| Negm S.           | Phys Dept Ain Shams Univ   |
| Nour-El-Din A. M. | Chem Dept El-Minia Univ    |
| Omar A. O.        | Phys Dept/Eng. ASU         |
| Omar Gaber T.     | Phys Dept Ain Shams Univ   |
| Omar M. T.        | Chem Dept Ain Shams Univ   |
| Osman Hamdy Y. A. | Fac Agriculture Cairo Univ |
| Philip Ch. A.     | Chem Dept Ain Shams Univ   |
| Rabie A. M.       | Chem Dept Ain Shams Univ   |
| Ragaie H. F.      | Electronics/Eng. ASU       |
| Ramadan H. H.     | Phys Dept Ain Shams Univ   |
| Ramadan M. R.     | Chem Dept Ain Shams Univ   |
| Ramadan R. M.     | Chem Dept Ain Shams Univ   |
| Ramsis M.N.       | Chem Dept Ain Shams Univ   |
| Raphael M. W.     | National Res Centre        |
| Saad E. A.        | Chem Dept Ain Shams Univ   |
| Saad M. M.        | Chem Dept Ain Shams Univ   |
| Sabry D. Y.       | Chem Dept Ain Shams Univ   |
| Sadek S. A.       | Chem Dept Ain Shams Univ   |
| Salama T. M.      | Chem Dept Al-Azhar Univ    |
| Salem A. M.       | Biochem Dept Ain Shams Un  |
| Salem A. I.       | Phys Dept Zagazig Univ     |
| Salem M. A. I.    | Chem Dept Ain Shams Univ   |
| Salem M. R.       | Chem Dept Ain Shams Univ   |
| Salem Th. M.      | Chem Dept/Girls ASU        |
| Sayed G. A.       | Chem Dept Ain Shams Univ   |
| Selim Suzy A.     | Chem Dept Ain Shams Univ   |
| Shaaban M. M.     | Geo. Dept Ain Shams Univ   |
| Shabana A. A.     | Chem Dept Al-Azhar Univ    |
| Shabban M. E.     | Chem Dept Ain Shams Univ   |
| Shalaby A. A      | Chem Dept Ain Shams Univ   |
| Shiba S. A.       | Chem Dept Ain Shams Univ   |
| Soliman A. E.     | Fac Agriculture Cairo Univ |

|                      |                                      |
|----------------------|--------------------------------------|
| <b>Souwaya E. R.</b> | <b>Chem Dept Ain Shams Univ</b>      |
| <b>Talaat H.</b>     | <b>Phys Dept Ain Shams Univ</b>      |
| <b>Tayeb A. M.</b>   | <b>Fac. Eng El-Minia Univ</b>        |
| <b>Tobia S. K.</b>   | <b>Chem Dept Ain Shams Univ</b>      |
| <b>Trabea A. A.</b>  | <b>Physics Dept Fac Edu El-Arish</b> |
| <b>Wali H.</b>       | <b>Ministry of Petroleum</b>         |
| <b>Youssef A. O.</b> | <b>Chem Dept Ain Shams Univ</b>      |
| <b>Youssef A. M.</b> | <b>Chem Dept Ain Shams Univ</b>      |
| <b>Youssef T. A.</b> | <b>Chem Dept Ain Shams Univ</b>      |
| <b>Zahra A. M.</b>   | <b>Chem Dept/Edu. ASU</b>            |
| <b>Zayan Mamdouh</b> | <b>Phys Dept Ain shams Univ</b>      |

12/24/94 12:06 AM